ecology and environment, inc.
CLOVERLEAF BUILDING 3, 6405 METCALF, OVERLAND PARK, KANSAS 66202, TEL. 913/432-9961
International Specialists in the Environment

MEMORANDUM

Site: Dugan Helterbrand
ID # MOD986919A48
Break: 2.3
Other: 9-29-91

TO: Paul Doherty, EPA/DPO

FROM: Janice Frizzell, E & E/TATM JF

THRU: Joe Chandler, E & E/TATL JCC

DATE: August 29, 1991

SUBJECT: Data for Dugan-Helterbrand Samples
TDD#: T07-9104-019B
PAN#: EM00919FBA

The following is a summary of the data review conducted by the Ecology and Environment, Inc., Technical Assistance Team (E & E/TAT) for two wood shaving samples submitted to General Physics Corporation in Gaithersburg, Maryland for analysis for total metals and cyanides by Contract Laboratory Program (CLP) protocol. This data review was conducted according to the three levels of data review for Region VII SOP No. 1610.2A, "Minimal Review (level II)". The results were coded according the the "Functional Guidelines for Evaluating Inorganics Analyses" and OSWER Directive 9360.4-01 with the following codes:

J = The associated value is an estimated quantity because the reported concentrations did not meet quality control criteria.

UJ = The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria was not met.

The overall quality of the data was good although it should be kept in mind that CLP protocol is intended for soils and water samples and that the sample matrix submitted (wood shavings) may be inappropriate for CLP protocols. Possible matrix interference was noted in the analyses for metals as the Matrix spike recoveries were low for some analytes. The values for manganese and cyanide were (J) coded as estimated values because they did not meet quality control criteria. Although below quantitation limits, the values for arsenic and selenium are (UJ) coded as not detected since they did not meet quality control criteria either.

REFERENCES

1. Region VII, "Standard Operating Procedure No. 1610.2A, Three Levels of Data Review" by Larry Marchin, May 3, 1989.

2. U.S. EPA, "Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses", July 1, 1988.

3. U.S. EPA, Office of Emergency and Remedial Response, "Quality Assurance/Quality Control Guidelines for Removal Activities", (OSWER Directive 9360.4-01), Washington, D.C.

ATTACHMENTS

Summary of Sample Results
Data Review for Total Metals and Cyanide

REVIEW OF DATA FOR TOTAL METALS AND CYANIDE

These data were reviewed according to the "Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses", July 1, 1988, revision. CLP protocol was requested and was followed for total metals in soil.

Laboratory:	General Physics Corporation, Gaithersburg, MD
Analyses:	23 TCL Metals
	Cyanide
Matrix:	Wood Shavings
Sample #:	BVXFQ064, BVXF1065

Holding Times
All holding times for metals and cyanide were met.

Calibration
The correct number of blanks and standards were run for each of the analyses. Correlation coefficients all met criteria.

The initial and continuing calibration verification standards (ICV and CCV) were all within control limits.

Blanks
All blanks had some contaminants (chromium, manganese) that were above the IDL but sample results were more than 5 times greater than the blank values so sample results are not coded. All blanks were run at appropriate intervals.

ICP Interference Check Sample (ICS)
All ICS results fall within required control limits and were run at appropriate intervals.

Laboratory Control Sample (LCS)
All LCS results fall within required specified requirements.

Duplicate Sample Analysis
All results were within control limits.

Matrix Spike Sample Analysis
All matrix spike recoveries were within required control limits, except manganese and cyanide which were outside control limits. These analytes are therefore (J) coded as estimated values. Arsenic and selenium are (UJ) coded as not detected because they did not meet quality control criteria due to low spike matrix recoveries and sample results that are below the IDL. It should also be noted that these elements were below quantitation limits anyway.

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, MD 20877

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926-6802

GP Work Order # 91-05-073

SAMPLE ANALYSIS REPORT

Prepared For:

ECOLOGY ENVIRONMENT, INC.
6405 METCALF AVE. BLDG# 3
OVERLAND PARK, KN 66202

OLOGY & ENV. HELTERBRAND CO.

Prepared By:

GP Environmental Services
202 Perry Parkway
ithersburg, Maryland 20877

May 28, 1991

annides, Laboratory Director

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9105073-01A
Client ID: BVXF0064

Matrix: WOOD_SHAVING
Collected: 05/09/91

Element	Method	Result	Det.Lim.	Units	Digested	Analyzed by
Aluminum	NCAMW 200.7	BQL	19.500	mg/Kg	05/15/91	PM 05/23/91
Barium	NCAMW 200.7	13.200	1.870	mg/Kg	05/15/91	TS 05/22/91
Beryllium	NCAMW 200.7	BQL	0.330	mg/Kg	05/15/91	DM 05/24/91
Cadmium	NCAMW 200.7	BQL	1.060	mg/Kg	05/15/91	TS 05/22/91
Calcium	NCAMW 200.7	697.000	61.400	mg/Kg	05/15/91	TS 05/22/91
Chromium	NCAMW 200.7	BQL	2.070	mg/Kg	05/15/91	PM 05/23/91
Cobalt	NCAMW 200.7	BQL	4.880	mg/Kg	05/15/91	PM 05/23/91
Copper	NCAMW 200.7	8.900	1.890	mg/Kg	05/15/91	TS 05/22/91
Iron	NCAMW 200.7	38.300	8.280	mg/Kg	05/15/91	TS 05/22/91
Magnesium	NCAMW 200.7	152.000	30.600	mg/Kg	05/15/91	TS 05/22/91
Manganese	NCAMW 200.7	106.000	1.110	mg/Kg (J)	05/15/91	PM 05/23/91
Nickel	NCAMW 200.7	BQL	6.950	mg/Kg	05/15/91	PM 05/23/91
Vanadium	NCAMW 200.7	BQL	4.140	mg/Kg	05/15/91	TS 05/23/91
Zinc	NCAMW 200.7	13.900	3.470	mg/Kg	05/15/91	TS 05/22/91
Antimony	NCAMW 204.2	4.0900	2.4000	mg/Kg	05/15/91	TS 05/16/91
Arsenic	NCAMW 206.2	BQL	0.5300	mg/Kg (UJ)	05/15/91	MG 05/15/91
Lead	NCAMW 239.2	0.5680	0.4200	mg/Kg	05/15/91	MP 05/17/91
Mercury	NCAMW 245.5	BQL	0.1100	mg/Kg	05/15/91	MGP 05/15/91
Potassium	NCAMW 258.1	413.0000	80.1000	mg/Kg	05/15/91	MP 05/23/91
Selenium	NCAMW 270.2	BQL	0.5600	mg/Kg (UJ)	05/15/91	TS 05/16/91
Silver	NCAMW 272.2	22.8000	1.3400	mg/Kg	05/15/91	TS 05/16/91
Sodium	NCAMW 273.1	1220.0000	53.4000	mg/Kg	05/15/91	MP 05/23/91
Thallium	NCAMW 279.2	BQL	0.4500	mg/Kg	05/15/91	TS 05/16/91

Notes and definitions for this report:
BQL = Below Quantitation Limit

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9105073-02A
Client ID: BVXFQ065

Matrix: WOOD_SHAVING
Collected: 05/09/91

Element	Method	Result	Det.Lim.	Units	Digested	Analyzed by
Aluminum	NCAMW 200.7	135.000	19.900	mg/Kg	05/15/91	PM 05/23/91
Barium	NCAMW 200.7	30.700	1.910	mg/Kg	05/15/91	TS 05/22/91
Beryllium	NCAMW 200.7	BQL	0.340	mg/Kg	05/15/91	DM 05/24/91
Cadmium	NCAMW 200.7	1.190	1.080	mg/Kg	05/15/91	TS 05/22/91
Calcium	NCAMW 200.7	4090.000	62.900	mg/Kg	05/15/91	TS 05/22/91
Chromium	NCAMW 200.7	5.810	2.120	mg/Kg	05/15/91	PM 05/23/91
Cobalt	NCAMW 200.7	BQL	4.990	mg/Kg	05/15/91	PM 05/23/91
Copper	NCAMW 200.7	40.100	1.940	mg/Kg	05/15/91	TS 05/22/91
Iron	NCAMW 200.7	180.000	8.480	mg/Kg	05/15/91	TS 05/22/91
Magnesium	NCAMW 200.7	258.000	31.300	mg/Kg	05/15/91	TS 05/22/91
Manganese	NCAMW 200.7	74.000	1.140	mg/Kg (3)	05/15/91	PM 05/23/91
Nickel	NCAMW 200.7	BQL	7.110	mg/Kg	05/15/91	PM 05/23/91
Vanadium	NCAMW 200.7	BQL	3.350	mg/Kg	05/15/91	TS 05/23/91
Zinc	NCAMW 200.7	30.700	3.560	mg/Kg	05/15/91	TS 05/22/91
Antimony	NCAMW 204.2	5.3600	2.4600	mg/Kg	05/15/91	TS 05/16/91
Arsenic	NCAMW 206.2	BQL	0.5500	mg/Kg (U5)	05/15/91	MG 05/15/91
Lead	NCAMW 239.2	1.2500	0.4300	mg/Kg	05/15/91	MP 05/17/91
Mercury	NCAMW 245.5	BQL	0.1100	mg/Kg	05/15/91	MGP 05/15/91
Potassium	NCAMW 258.1	638.0000	82.1000	mg/Kg	05/15/91	MP 05/23/91
Selenium	NCAMW 270.2	BQL	0.5700	mg/Kg (U5)	05/15/91	TS 05/16/91
Silver	NCAMW 272.2	8.2700	0.5500	mg/Kg	05/15/91	TS 05/16/91
Sodium	NCAMW 273.1	4220.0000	54.7000	mg/Kg	05/15/91	MP 05/21/91
Thallium	NCAMW 279.2	BQL	0.4600	mg/Kg	05/15/91	TS 05/16/91

Notes and definitions for this report:
BQL = Below Quantitation Limit

GP ENVIRONMENTAL SERVICES
WET CHEMISTRY ANALYSIS RESULTS

GP ID: 9105073-01A
Client ID: BVXF0064

Collected: 05/09/91
Matrix: WOOD_SHAVING

Parameter	Method	Result	Det.Lim.	Units	Analyzed by
Percent Solids	MCAWW 160.3	89.840		%	CH 05/17/91 02:00:00
Total Cyanide	SOW390/335.2	(J) 45.4	4.45	mg/Kg	FU 05/21/91

GP ID: 9105073-02A
Client ID: BVXF0065

Collected: 05/09/91
Matrix: WOOD_SHAVING

Parameter	Method	Result	Det.Lim.	Units	Analyzed by
Percent Solids	MCAWW 160.3	87.730		%	CH 05/17/91 02:00:00
Total Cyanide	SOW390/335.2	(J) 102	22.8	mg/Kg	FU 05/21/91

Notes and definitions for this report:
BQL = Below Quantitation Limit

CHAIN OF CUSTODY RECORD
ENVIRONMENTAL PROTECTION AGENCY REGION VIII

ACTIVITY LEADER (Print)	NAME OF SURVEY OR ACTIVITY	DATE OF COLLECTION (DAY MONTH YEAR)	SHEET
Robert Wiggons	Dyon-Helterbrand Co, Inc.	09 05 91	1 of 1

CONTENTS OF SHIPMENT

SAMPLE NUMBER	CONTAINER	32 OZ BOTTLE	BOTTLE	BOTTLE	VOA SET (2 VIALS EA)	SAMPLED MEDIA				OTHER	RECEIVING LABORATORY REMARKS/OTHER INFORMATION
BVXFQ064		1								✓	[illegible]
BVXFQ065		1								✓	[illegible]

NUMBERS OF CONTAINERS PER SAMPLE NUMBER

DESCRIPTION OF SHIPMENT

2 PIECE(S) CONSISTING OF ______ BOX(ES)

1 ICE CHEST(S); OTHER ______

MODE OF SHIPMENT

✓ COMMERCIAL CARRIER: Federal Express

___ COURIER

___ SAMPLER CONVEYED

9622822133
(SHIPPING DOCUMENT NUMBER)

PERSONNEL CUSTODY RECORD

RELINQUISHED BY (SAMPLER)	DATE	TIME	RECEIVED BY	REASON FOR CHANGE OF CUSTODY
[signature] ☒ SEALED ☐ UNSEALED	5/13/91	1700 hrs	[signature] ☐ SEALED ☐ UNSEALED	Lab
RELINQUISHED BY ☐ SEALED ☐ UNSEALED	DATE	TIME	RECEIVED BY ☐ SEALED ☐ UNSEALED	REASON FOR CHANGE OF CUSTODY
RELINQUISHED BY ☐ SEALED ☐ UNSEALED	DATE	TIME	RECEIVED BY ☐ SEALED ☐ UNSEALED	REASON FOR CHANGE OF CUSTODY

7-EPA-9262 (Revised 5/85)